We Claim:

1. An intelligent trolley module for use in an assist system, comprising:

plurality of wheels;

an actuator for driving at least one of the wheels;

5   a computational node controlling actuation of the motor driving the wheels of the trolley; and

a communication interface providing input/output communication with other intelligent modules.

10   2. The intelligent trolley of claim   1 further wherein the actuator comprises a gearing.

3. The intelligent trolley of claim   1 further wherein the actuator comprises a motor.

15

4. The intelligent trolley of claim   1 further wherein the computational node implements a virtual limit controlling motion of the trolley.

5. The intelligent trolley of claim   1 further wherein the computational node

20   implements a virtual limit controlling motion of the trolley.

6. The intelligent trolley of claim 1 further comprising a roller.

7. The intelligent trolley of claim 1 further comprising a manually operable roller

25   release.

8. The intelligent trolley of claim 1 further comprising an automatic roller release.

- 43 -

9. The intelligent trolley of claim 1 further comprising a position indicator for indexing motion of the device.

10. The intelligent trolley of claim 9 where the position indicator comprises a hall switch.

11. The intelligent trolley of claim 1 furtherutilizing odometry for monitoring the motion of the trolley.

12. An intelligent lift module for use in an assist device, comprising

a support moving a payload;

a computational node controlling movement of the payload; and

a communication interface providing input/output communication with other modules.

13. The intelligent lift module of claim 12 where the support comprises a cable.

14. The intelligent lift module of claim 12 where the cable is raised and lowered by a reel.

15. The intelligent lift module of claim 14 where the reel comprises a translating reel.

16. The intelligent lift module of claim 15 where the reel comprises a slidable translating reel.

17. The intelligent lift module of claim 15 where the reel further comprises a cam follower.

18. The intelligent lift module of claim 12 further comprising a replaceable guide unit containing a cam follower.

19. The intelligent lift module of claim 12 further comprising a position indicator.

5

20. The intelligent lift module of claim 18 further comprising a hall switch.

21. The intelligent lift module of claim 18 further comprising a motor encoder.

10   22. The intelligent lift module of claim 18 wherein the reel is indexed comprising a plurality of hall switches indexing multiple rotations of the reel.

23. The intelligent lift module of claim 12 comprising a virtual limit to the lift.

15   24. An input device for use in an assist system, comprising:

a handle for gripping; and

at least one proportional control;

wherein the input device is in communication with a multi-function hub having a physical interface for providing mechanical support within the assist system, and wherein

20   the proportional control when pressed provides a proportional output signal to the hub.

25. The input device of claim 24 wherein the input device comprises a pendant.

26. The input device of claim 24 wherein the proportional control provides for an

25   up or down signal to lift a payload up or down respectively.

27. The input device of claim 24 wherein the proportional button comprises a shaft to rotate a magnet in the vicinity of a hall effect sensor to create the proportional signal output.

- 45 -

28. The input device of claim 24 further comprising a plurality of conventional buttons that can be assigned specific functions.

5   29. The input device of claim 28 wherein the specific functions comprise stop and reset.